Brief communication

Epidemiology and clinical characteristics of herpes zoster in a tertiary care hospital in Brazil

Luciana Antonioli, Camila Rodrigues, Rafael Borges, Luciano Z. Goldani *

Universidade Federal do Rio Grande do Sul, Hospital de Clínicas de Porto Alegre, Seção de Doenças Infecciosas, Porto Alegre, RS, Brazil

ARTICLE INFO

Article history:
Received 15 February 2019
Accepted 10 March 2019
Available online 29 March 2019

Keywords:
Herpes zoster
Clinical manifestations
Epidemiology

ABSTRACT

Background: There is little information on herpes zoster from hospital registries in South America. The aim of this study was to describe the epidemiological and clinical aspects of herpes zoster (HZ) in hospitalized patients. Method: We searched for hospital-based records during the period from March 2000 to January 2017 in a 700-bed tertiary-care hospital located in southern Brazil. The medical records of all eligible patients were reviewed, and data regarding demographics, medical history, clinical and laboratory characteristics, treatment regimens, and clinical outcomes were collected. Patients were also evaluated for mortality.

Results: There were 801 records of herpes zoster according to the proposed criteria. Most patients with HZ presented a cutaneous clinical form of the disease with involvement of a single dermatome (n = 589, 73.5%). Additional clinical characteristics included post-herpetic neuralgia (22.1%), ophthalmic HZ (7.6%) and meningoencephalitis (2.7%). Most patients presented immunocompromised conditions (64.9%) including HIV, administration of immunosuppressive agents, and malignant neoplasms. During this period, there were 105 (13.1%) deaths, which were mostly unrelated to HZ. Five deaths were related to HZ meningoencephalitis.

Conclusion: The results of this study demonstrate a high burden of HZ disease in a Brazilian tertiary care hospital in the HZ vaccination era. Awareness of the incidence and comorbidity factors associated with HZ in Latin American countries such as Brazil contribute for adoption and implementation of strategies for immunization in this area.

© 2019 Sociedade Brasileira de Infectologia. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Herpes zoster (HZ), which is caused by reactivation of latent varicella zoster virus (VZV), afflicts about 30% of the global population overall and is accompanied by substantial morbidity.1–3 However, there is little information on herpes zoster from hospital registries in Brazil. The aim of this study was to describe the clinical presentation of herpes zoster in hospitalized patients.

We retrospectively searched for hospital-based records of 802 code (ICD-10) between March 2000 and January 2017 in a 700-bed tertiary-care university hospital located in southern Brazil. The medical records of all eligible patients were reviewed, and data regarding demographics, medical history, clinical and laboratory characteristics, treatment regimens, and clinical outcomes were collected. The study was approved...
months. During this period, there were 105 (13.1%) deaths, which were mostly unrelated to HZ. Five deaths were related to herpes zoster meningoencephalitis.

In a prospective, observational study conducted in a primary hospital’s emergency room in São Paulo, Brazil, one-hundred forty-six zoster patients were enrolled. The mean (SD) age was 69.9 years old, and the majority were female (64.4%). At baseline, 78.1% of patients presented with a herpes zoster rash. Approximately half of the patients (49.3%) experienced postherpetic neuralgia. The most commonly affected site was the thoracic region (38.4%), followed by the cervical (15.1%) and lumbar (13.7%) regions. Underlying conditions of the patients were not described in the study. A recent study in Iran evaluated herpes zoster cases admitted in a university hospital. Most patients were males (60.4%). Head and neck involvement occurred in 78 people (59.1%), thoracoabdominal region in 37 cases (28%), and extremities in 16 cases (12.1%). Predisposing factors included diabetes mellitus, malignancy, immunosuppressive medication, HIV infection, radiotherapy, and tuberculosis. In our study, herpes zoster was diagnosed in most hospitalized patients ≥50 years, with immunosuppressive conditions including HIV infection, malignancy, and administration of immunosuppressive medications. Despite the high rate of immunosuppressive conditions of our patients, cutaneous involvement of a single dermatome was the most frequent clinical manifestation. Similar to our findings, unusual manifestations of herpes zoster such as central nervous and ophthalmic involvement were rarely reported.

The overall all-cause mortality rate of our patients with herpes zoster was relatively low (13%) when considering the comorbidity conditions of the patients. The data from the World Health Organization (WHO) database has shown that the estimates for the overall herpes zoster mortality incidence in those aged >50 years varied widely between the countries. In the European (WHO) database, the overall mortality ranged from 0 to >0.07/100,000. A similar increase with age was seen for the hospital fatal rate; 0.6% in those 45–65 years in the UK and 7.1% in those ≥80 in Spain. Although the available data on herpes zoster-associated mortality are too heterogeneous to allow inter-country comparisons, they demonstrate that the mortality rate for herpes zoster is not high. Awareness of the incidence and comorbidity factors associated with HZ in the elderly and immunocompromised population in Latin American countries such as Brazil contribute for adoption and implementation of strategies for immunization in this area. Limitations of our study includes the retrospective design, hospital-based, and short follow-up of the patients.

**Funding**

Dr. L.Z. Goldani has participated in clinical trials funded by GlaxoSmithKline.

**Conflicts of interest**

The authors declare no conflicts of interest.
Acknowledgments

This study was supported in part by CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico) – Brazil.

REFERENCES